

Office Action Summary

Application No.

10/575,920

Applicant(s)

BUNCE ET AL.

Examiner

LINDSAY NELSON

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 and 15 is/are allowed.
- 6) ☒ Claim(s) 16-18 and 20-25 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/23)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 06/08/2010.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 8-9 of REMARKS, filed 05/25/2010, with respect to claims 1-13 and 15-25 have been fully considered and are persuasive. The rejection of 03/25/2010 has been withdrawn.
2. However, the Examiner would like to point out that the amendment of claim 1 only makes allowable the method of claims 1-13 and 15. Claims 16-25 remain, as currently written, unpatentable.
3. Claims 16-19 are directed to a powder (product claim) made by the method of claim 1. As stated in the MPEP, "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (see MPEP 2112 [R-1]).
4. Therefore, because the prior art previously relied upon to reject the claims, Goodwin et al, WO 03/086029 (Equivalent of US Patent No. 7,438,882; hereinafter Goodwin), disclosed the above requirements for claims 16-18, the rejection of the product claims still reads on the instant claims.

5. Claims 20-24 are directed to an apparatus (apparatus claim). The apparatus, in its entirety, requires:

- a. a *means for* generating an excited and/or unstable gas species,
- b. a means adapted to introduce a gaseous and/or liquid precursor, and
- c. a *means for* collecting resulting powder and/or discrete gelled particles.

Hence, the powders/particles/gels etc. are NOT part of the apparatus, but merely contained within a future intended use statement.

6. According to the MPEP, a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

7. Therefore, because the prior art previously relied upon to reject the claims, Goodwin, disclosed the above requirements, the rejection of the apparatus claims still reads on the instant claims.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent

and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

9. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

10. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 20-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 23-26 of copending Application No. 10/575,119. Although the conflicting claims are not identical,

they are not patentably distinct from each other because they claim substantially the same apparatus.

12. Regarding claim 20, both the claims of instant Application and the claims of the copending Application require an apparatus comprising a means for generating an excited and/or unstable gas species, a means to introduce a gaseous and/or liquid precursor, and a means for collecting the resulting powder and/or discrete gelled particles.

13. According to the MPEP, a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

14. With the same arguments as presented above, claims 21-24 of instant Application require substantially the same limitations as that of copending Application's claims 24-26. There is no patentable distinction between them.

15. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

16. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

17. Claim 25 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 25 provides for the use of the powder and/or discrete gel particles of instant claims, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 25 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 16–18, and 20 - 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Goodwin et al, WO 03/086029 (Equivalent of US Patent No. 7,438,882; hereinafter Goodwin).
3. With regard to claims 20 - 24, attention is brought to Figure 1 of Goodwin which is substantially similar to that of instant Figure 3 in which the liquid precursor meets with the treated gas downstream and is allowed to react, which reads on the claimed use of a fluidised or circulating bed.
4. Regarding claims 16 and 18, Goodwin further discloses a silicone resin of the formula
$$\{R^{w1}\}_wSi(O_{1/2})_w\{R^{x1}\}_xSiO_{2,22}\{R^{p1}\}_pSiO_{4/2}\{R^{z1}\}_zSiO_{4,22}\}_2$$
5. Wherein each R^w is independently an alkyl, alkenyl, aryl, H, OH, and w+x+p+z=1 and w and x are less than 0.9 and p+z is greater than 0.1 which is formed by the process of their invention (column 4, lines 14 – 21), which reads on an organometalloid oxide powder as claimed.
6. Regarding claim 17, Goodwin discloses that the average particle size of particles formed is from 1 nm to 2000 μm (column 5, lines 52 – 54) which reads on the claimed particle size.
7. Regarding claim 25, Goodwin further discloses the use of the powdered particles in optoelectronics, photonics, solid-state electronics, flexible electronics, optical devices, flat panel displays and solar cells (column 9, lines 14 - 18) which reads on the claimed use of the powder.

Allowable Subject Matter

8. Claims 1-13 and 15 are allowed.
9. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
10. The following is a statement of reasons for the indication of allowable subject matter:
11. Claims 1-13, 15 and 19 require that the liquid precursor should be an organic compound. Goodwin does not disclose that liquid precursors can be used in their apparatus.
12. Yadav, US Patent number 6,569,397 (hereinafter Yadav) discloses a method for producing fine powders of oxides, carbides, nitrides, borides, chalcogenides, metals and alloys (abstract) by a substantially similar method (see Figure 2). Example 5 of Yadav further shows the formation of a silicon powder via the above method useful biomedical applications, electronic and electromagnetic devices, films and coatings, and also for sensors (EXAMPLE 5). Furthermore, Yadav discloses that the precursor can be organic compounds such as methane, ethylene, acetylene, ethane, benzene, and others. However, Yadav does not disclose the appropriate temperature range. Yadav discloses a temperature range which includes heats above 3000 °C which would decompose most of the biological powders produced by instant claims.

13. Claim 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINDSAY NELSON whose telephone number is (571)270-7735. The examiner can normally be reached on M-Th, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/575,920
Art Unit: 1796

Page 10

/LINDSAY NELSON/
Examiner, Art Unit 1796

/RANDY GULAKOWSKI/
Supervisory Patent Examiner, Art Unit 1796